



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,630	03/08/2001	Kars-Michiel Hubert Lenssen	NL 000094	8319

24737 7590 06/26/2003

PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER

DOLAN, JENNIFER M

ART UNIT	PAPER NUMBER
----------	--------------

2813

DATE MAILED: 06/26/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/801,630

Applicant(s)

LENSSEN, KARS-MICHEL  
HUBERT

Examiner

Jennifer M. Dolan

Art Unit

2813

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 29 May 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 29 May 2003. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.


NOTE: \_\_\_\_\_

3. ☒ Applicant's reply has overcome the following rejection(s): none.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.Claim(s) objected to: none.Claim(s) rejected: 1-4 and 6-16.Claim(s) withdrawn from consideration: none.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

  
CARL WHITEHEAD, JR.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

. Continuation of 5. does NOT place the application in condition for allowance because: The applicant argues that U.S. Patent No. 6,175,475 to Lin et al. does not teach the claimed subject matter. This is not persuasive, because a mainly ferromagnetic coupling between a first and second structure is expected for a layer structure consisting of a stacked pinned layer, spacer, free layer, 2-15 nm thick Ta layer, pinned layer, and AFM layer in order, as is explained in pages 4-6 and 14 of the present application, as well as figures 1-2. It does not matter whether Lin explicitly teaches of an 'orange-peel' ferromagnetic coupling between the two structures, an influencing of the magnetic characteristics of the first structure based on the second structure, or the ability to 'tune' a magnetic characteristic of one structure based on the other. Because both Lin and the Applicant disclose structures consisting of (in stacked order): AFM / pinned layer / spacer layer / free layer / 2-15 nm Ta / pinned layer / AFM, the structures taught by both Lin and the Applicant must inherently have the same properties. Additionally, regarding claim 14, Lin discloses that Ta is defined between the second and first structures. Ta is a material which inherently and automatically induces a texture upon overlying layers, as is noted in column 4, lines 63-67 of Lin, and on page 14 of the present application. Since it is the patentability of the product that is being examined, rather than observed properties of a structure, and since Lin discloses a structure/product substantially identical to that of the applicant, the structure of Lin must inherently have the claimed properties, regardless of whether they are explicitly discussed in Lin, or whether they are observed at all by Lin.

If Lin in fact does not have the claimed properties (i.e., the 'orange peel' ferromagnetic coupling of the present application is not based upon the layer structure), then the present application is not enabling, since there is no explanation in the present application of what treatments or changes may have been enacted on the free magnetic layer, Ta spacer layer, and second structure of the present application, in order to cause the claimed ferromagnetic coupling. As it is presently understood from the disclosure of the present application, microwaviness of the magnetic layers is expected to be present for any soft ferromagnetic layers, and separating two soft ferromagnetic layers by 2-15 nm of Ta will automatically cause ferromagnetic 'orange peel' coupling between the two layers.